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37TH AIR RESCUE SQUADRON-- A TQM EXPERIMENT

BY

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37th Air Rescue Squadron--A TQM Experiment

An Individual Study Project

by

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Abstract

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A portrayal and analysis of one of the first US Air Force operational squadron Total Quality Management implementation experiments. A success story of using quality philosophy and methodologies to correct longstanding mission neglect. Using TQM's fundamentals of mission identification, customer focus, worker empowerment, statistical measurement, and cultural change, the 37th Air Rescue Squadron achieved notoriety as one of the best squadrons in the command and earned TQM praise from the Rochester Institute of Technology/USA Today. TQM is applicable to operational military organizations if senior leadership provides the proper cultural values through their actions. The theme of lessons learned is more attention must be placed on doing the right thing; instead of doing things right.

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DO THE RIGHT THINGS, FOR THE RIGHT REASONS,
AND CONSTANTLY STRIVE FOR IMPROVEMENT.[1]

INTRODUCTION

This is a story of an organization that tried to do the right things for the right reasons and found success. The story is not how to implement Total Quality Management (TQM). Rather, it is the examination of one, unique Air Force operational helicopter squadron that tried. It is both a horror and success story. Horror in that the TQM efforts uncovered leadership and management aspects which could easily be argued should never had been present; regardless, they were. It is a success story because TQM was the backdrop for correcting these ills.

The premise of this paper is that an examination of one of the first operational Air Force squadrons to begin implementation of Total Quality Management can be of value to other operational squadrons and to senior military leadership. Responding to the demand for examples of TQM applicability to military organizations other than logistical depots, this may go a long way to debunking the myth of TQM being a civilian, business management concern. Furthermore, an analysis of the salient aspects manifest in an operational military squadron's experience should provide lessons for senior leadership.

The focus of this paper is the 37th Air Rescue Squadron. At the time of the experience, it was one of a

dozen Air Rescue Service squadrons administratively commanded by the Military Airlift Command. The 37th Air Rescue Squadron achieved the distinction as the command's "Rescue Squadron of the Year for 1991" and was acknowledged by the Rochester Institute of Technology/USA Today Quality Competition in 1992.

The 37th Air Rescue Squadron consisted of a small management headquarters staff and eight subordinate, geographically-separated, operational helicopter detachments. The headquarters was located at Francis E. Warren Air Force Base, Cheyenne, Wyoming along with one of its detachments. The remaining seven units were dispersed throughout the western United States: in California, Washington, Montana, South and North Dakota, and Missouri (Fig. 1). Flying two different models of the Bell UH-1 utility helicopter, the detachments performed diverse support missions for a variety of Air Force commands. Six of the units were based at Air Combat Command (formerly Strategic Air Command) intercontinental ballistic missile (ICBM) bases to provide nuclear surety security, logistics, and personnel transportation flights. One unit was stationed at the Air Training Command's Fairchild Air Force Base to perform combat rescue training for the US Air Force Survival School. The last detachment performed transportation and surveillance flights at Vandenberg Air Force Base's Western Ballistic Missile Test Range. Additionally, each of the units were secondarily tasked to perform peacetime humanitarian missions in support of the

National Search and Rescue Plan. The diversity, geographic separation, and small headquarters aspects of the 37th Air Rescue Squadron all contributed to the Air Rescue Service Commander's decision to use the 37th as his "Total Quality Management Spotlight Squadron." The Air Rescue Service mirrored the ogranization, geographic disperaal, and mission diversity of the 37th Air Rescue Squadron. Therefore, the hope was, lessons learned from the test squadron may have applicability to the Air Rescue Service at large.

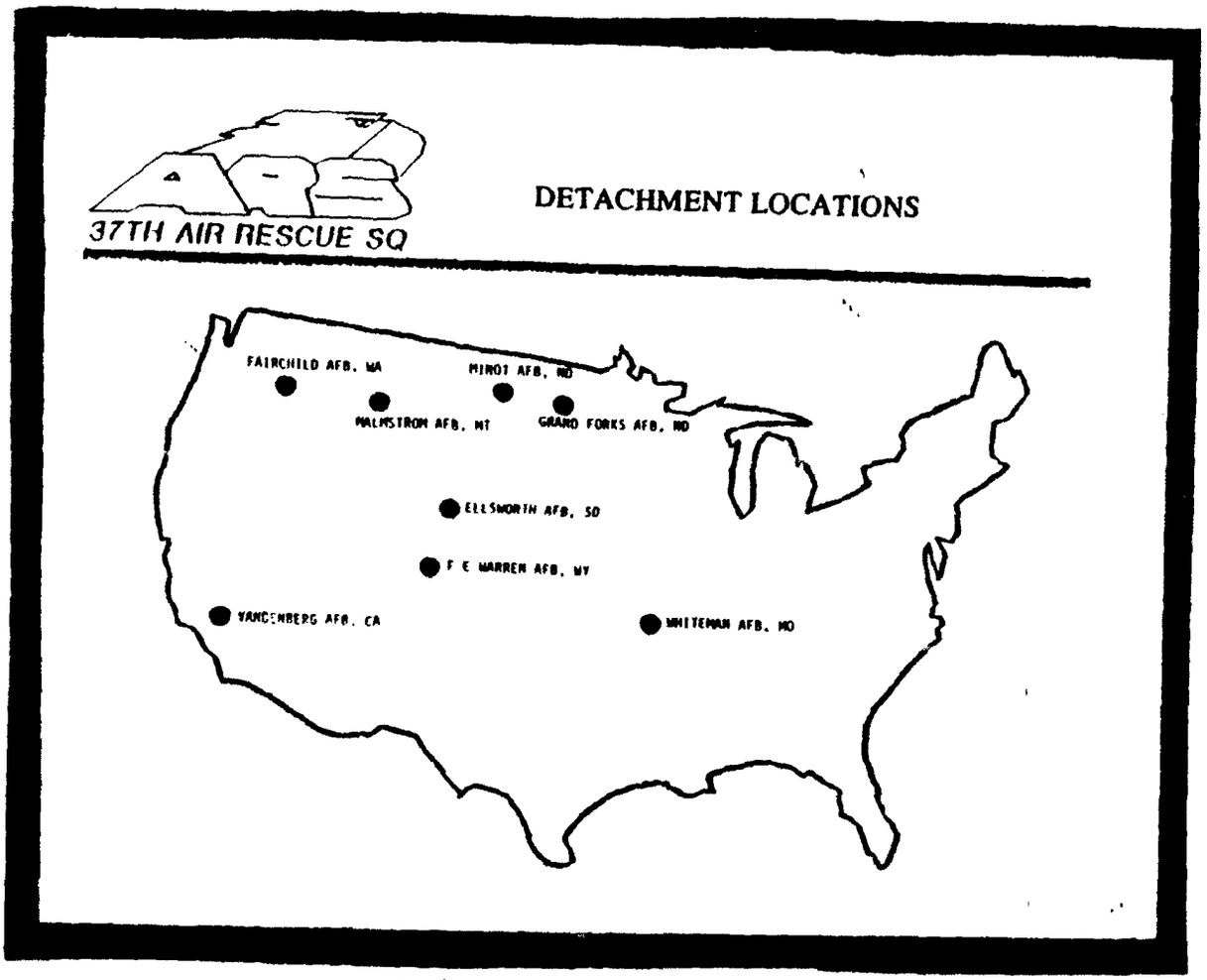

Fig. 1 (Map of 37th Air Rescue Sq)

COMMITMENT

In the fall of 1990, the 37th squadron and each of the detachment commanders attended a Quality Awareness training session hosted by the Air Rescue Service. Alongside all the commanders of rescue squadrons from around the world, the 37th key personnel received TQM training from Organizational Dynamics Inc., a management consulting firm. Using Rescue's military instructors the squadron then hosted Quality Awareness training for their headquarters staff and two facilitators from each detachment. In turn, the detachment facilitators and unit commanders conducted training for their people. Materials for this training used the Military Airlift Command's TQM series, which included specialized workbooks for: Quality Awareness, Facilitator Training, and Quality for Leaders. This training was also augmented by civilian specialists in team and culture building. Initial training costs were approximately $20,000, representing 10 percent of the squadron's annual travel monies.[2] A rather significant fiscal commitment.

The Squadron began with a vision statement. History of the organization was studded with excellent performance perceptions; so the vision statement went one step further, acclaiming "Detachment Dedication: Superior Service for Multi-MAJCOM Support." It heralded a qualitative improvement, from excellent to superior; it placed the detachment up front (vice the squadron headquarters); and it clearly focused on the multiple host base agencies as

the customer.

In addition to the monetary investment of the training mentioned earlier, the squadron published operating instructions and a quality charter which identified quality as "Doing the RIGHT thing, right."[4] Setting the tone for empowerment, the squadron headquarters philosophy espoused an anti-bureacracy attitude. The desire was to change the squadron headquarters from an agency for permission, to one of advisor. The operational detachments were encouraged to support their hosts with the admonition: "if its not unsafe, illegal, or stupid, you may do it."[5] Quality Councils were formed at the squadron headquarters and each detachment. Council membership included a cross functional representation of senior unit leadership. And at the detachments, Quality Councils also included the Site Manager of the civilian, contract maintenance company.

To set the tone, the squadron commander delegated the most sacred of historical decisions. The regulations required the squadron commander's permission for an operational night mission. This decision was delegated to the detachment commander. They were the one's with first hand knowledge of the mission legitimacy, weather conditions, and aircrew capabilities. To call the separated squadron commander was certainly not adding value to the process. Of course, for those mission requests with marginal conditions or unusual characteristics, the detachment commanders were still encouraged to consult their headquarters. The emphasis was advice, not permission.

CUSTOMER ALIGNMENT

Immediately good things began to happen. For the six ICBM support units, escorting the ground movement of nuclear weapons convoys provided essential surveillance and communication links for security and safety. Even the Strategic Air Command (SAC) required these movements during daylight hours[5], but sometimes things would go wrong and a mission would have to proceed (or continue its progress) after sunset. Traditionally, the overhead helicopter would leave the convoy, due to a feeling that the squadron did not condone flying after dark. Armed with a new found freedom, detachment commanders instantly began remaining with the convoy even after dark. Local ICBM wing commanders were astonished. One such commander during an interview concerning the issue stated, "I never understood why you would leave us during a phase of the mission that we needed you the most.[6]" Surprisingly, there had been no voiced displeasure with the poor support until the customer was surprised with proper support.

The next surprise was that base-wide superior service became contagious through customer involvement. Several ICBM wing security chiefs started complaining about the lack of helicopter support for their contingency security responsibilities. (The acid test of whether a climate exists to encourage change is how you handle complaints[7]). Over the years the units had drifted away from security flights, toward the more routine and manageable missions of

administrative scheduled airlift. Wing security Operations Plans called for quarterly nuclear security exercises involving responses to threats far out into the missile fields, but they drove instead of flying. The plans listed the requirement for helicopter 'As Available'[8], and since the helicopter detachments seemed adverse to support, the wing security people had stopped asking years ago. A Process Improvement Team (PIT) chartered by the squadron, including ICBM wing security members, studied the problem. In addition to unit apathy they discovered organizational barriers. For example, the tactical maneuvering of flights with security personnel into threatened missile sites was absent from corporate plans. There was no pilot initial training and qualification in the maneuvers; there were no aircrew currency training events; there were no recurring flight evaluations in the scenarios; and in fact the governing regulation prohibited security police passengers from helicopter flights where tactical maneuvering was performed.[9] What was present in the regulation only allowed for tactical maneuvering during rescue exercises (Rescue was the parent organization of the squadron).

The PIT identified these and other deficiencies, suggested corrective measures, and submitted a large package of regulatory changes to the major command. One ICBM wing vice-commander was so excited about the activities he hosted an exercise exclusively for nuclear security helicopter scenarios. The squadron brought helicopters and aircrews in from all seven of the other detachments. This exercise is

now an annual event which replaced the pre-existing rescue exercises. Another annual event of significance (ORIs) changed. The Military Airlift Command, undergoing their own initial steps toward TQM, heard about the radical changes at the 37th. The MAC Inspector General office established PITs to rewrite their regulations. They invited 37th representation on the PIT to address the criteria for the Operational Readiness Inspections of the 37th squadron. Unbelieveably, the applicable regulation, MACR 123-1, did not have any existing criteria for ICBM missile wing helicopter units. The inspections had always been accomplished, using the "closest" criteria in the book - Rescue Procedures. The squadron gave the IG copies of the newly created squadron mission manual which clearly stated the squadron's ICBM, Survival School, and Western Test Range mission areas. For the first time, the IG and the unit knew what they were going to be inspected on, and more importantly it reflected the pertinent host base support missions.

MEASUREMENT

The above mission improvements clearly brought to light several aspects of the squadron's nonsupport of their host wing customers. The vision statement's call to "superior" support may have been erroneously based on an assumed "excellent" history. Actually measuring the squadron's

support turned out to be it's biggest and most productive challenge.

Historically, the only measuring device the squadron used was an accounting of the flying hours performed by each detachment (host bases were paying the bills). Monthly, quarterly, and annual reports identified the amount of flying time provided to the host base mission.[10] This flying time was compared to all of the other flying time accumulated. For example, a typical detachment would fly 1,500 hours per year. Of that, usually 800 hours would be registered as host base support missions (a little more than 50%). The remainder of the time was consumed with training sorties for aircrews, maintenance check flights, civilian search and rescue missions, and higher headquarters (administrative command, not operational command) directed ventures. There was a fascination and fixation on this report akin to Deming's warning against doing business on price tag alone.[11] In fact, the detachment which could attain the highest percentage of host support flying hours had bragging rights as "the best detachment."

Of course the amount or percentage of flying time told absolutely nothing concerning the effectiveness or reliability of the support. Supported wing commanders voiced little, if any, concern over the flying time. What they cared about: Were we there when they needed us? Did we get the task done? The flying time report was probably worse than being a singular measurement device, it was a dishonest one. It was abandoned and a new one installed.

The measurement system the 37th squadron created was based on the Federal Express model.[12] Federal Express analyzed their receipt, handling, and delivery of package mail service to determine the critical nodes of action. Any one of the identified activities could cause the partial or complete failure to meet the customer's expectations. They weighted the process points with 1, 5, or 10 points. A failure of an action triggered an assignment of failure points; and based against the total possible points for all actions, an index was determined. They called this numerical value their Service Quality Index (SQI). The 37th squadron used the Federal Express model to create their new measurement system; not so creatively calling their index the 37th Support Quality Index (37 SQI).

Specifically, the squadron identified three major categories of missions: passenger transportation, cargo transportation, and patient transportation. Within each of these major groupings more finite types of missions were identified. For example, (Fig 2) within passenger transportion were mission types of security personnel, administrative airlift, etc. Cargo transportation missions included missile parts delivery, photographic missions, etc. Lastly, patient missions focused on search missions, medical evacuation flights, and the federally sponsored Medical Assistance to Traffic and Safety (MAST) flights.

PASSENGER AIRLIFT

Det # _____ ODO _____
Date _____ DO/CC Review _____
Mission _____
GOAL: To Improve Customer's Perception of Our Helicopter Airlift Service

OBJECTIVE: Improve Satisfaction of Transported Passengers

KEY RESULT AREAS: *MISSILE CREWS* *ORIENTATION/INCENTIVE*
(circle one)
SECURITY *MAINTENANCE* *SURVIVAL SCHOOL*
EXECUTIVES *BASE SUPPORT*

SUPPORT QUALITY INDEX (SQI)

Indicator*	CREW	COPS	EXEC.	BASE	ORIENT.	MAINT.	SURVIVAL
MSN Canx	5	10	10	5	1	10	10
T/O not timely	1	5	10	5	5	10	5
Arrival not timely	5	-	10	10	-	10	10
PAX not returned to base timely	10	5	10	5	5	5	-
Not overhead on time	-	10	-	-	-	-	10
Itinerary not fully met	-	10	5	5	5	5	10
Complaint – Safety	10	10	10	10	10	10	10
Complaint – Comfort	5	5	5	5	5	5	5
Complaint – Bags	1	1	1	1	1	1	1
Complaint – Other	1	1	1	1	1	1	1

remarks for any assessed points

_____

_____

_____

_____

* Definitions on reverse

Fig. 2 (Passenger Airlift SQI Form)

Typical 37 SQI points for key actions during a mission can be seen from an explanation of a straight forward equipment transportation mission.

Routine Cargo Mission

Indicator	Points Assessed
Mission Cancelled	5
Untimely Takeoff	1
Untimely Arrival	5
Lost/Damaged Equipment	10
Safety Complaint	10
Comfort Complaint	5
Baggage Complaint	1
Misc. Complaint	1

Total possible points for not meeting the wing's expectations on this mission were 38. Total failure would be 38 points per 1 mission SQI. Totals for each type of mission and major category were tabulated monthly. Only the major category SQI was reported to the squadron headquarters; subtotals and reasons for problems remained at the local detachment for analysis and action.

Computing the SQI based upon a ratio per 100 missions standardized the figure for easy record keeping. December 1990 figures displayed the following squadron-wide SQIs

Passenger Airlift = 275 SQI

Cargo Airlift = 245 SQI

Patient Airlift = 5 SQI

The above figures represented the measurement baseline. What they revealed was partial verification of our excellent self-perception. A 275 SQI for 100 passenger missions meant an average of 2.75 points per mission; approximately a 90 percent customer satisfaction rate. But they also pointed to glaring actions needing attention. The very low patient airlift SQI was significantly pleasing considering the emotional and physical importance attached to humanitarian missions. Five months later the squadron aggregate SQI was cut in half (Fig 3). The measurement system was later replaced by an Air Rescue Service/Military Airlift Command system of comparable mechanics.

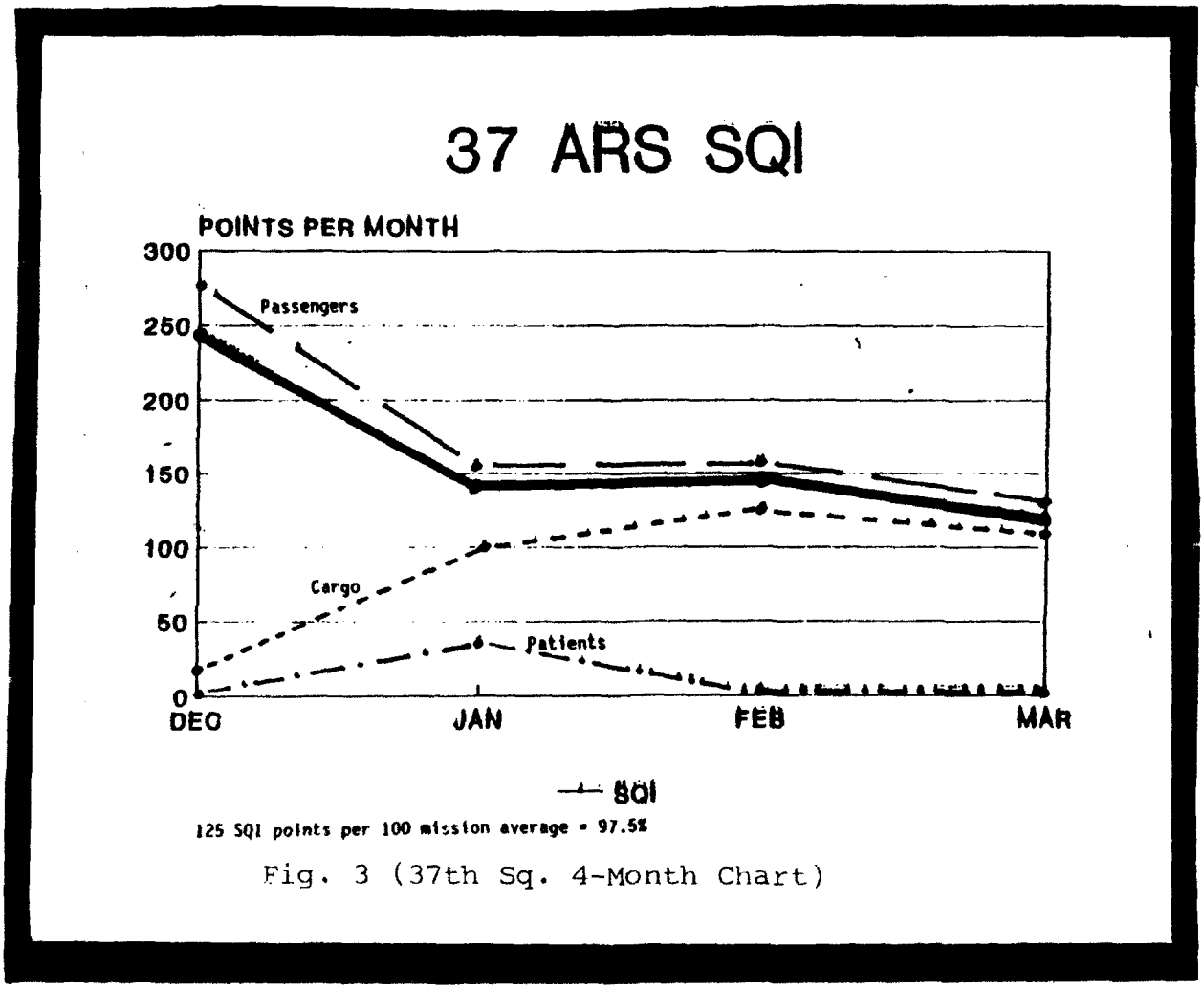

Fig. 3 (37th Sq. 4-Month Chart)

Before continuing, it may be instructive to explain the "safety" points philosophy, because it goes to the heart of the customer-based attitude of the SQI indicator definitions. Safety was given the highest weight (10 points) for obvious reasons. Not so evident are the rules of the indicators application. Safety was measured strictly from the passenger's viewpoint. For example, if during the course of a flight the aircrew experienced a malfunction to which they had to make some other than routine actions, the impact on the passengers was assessed. If the passengers felt totally secure and confident by the aircrew actions (regardless of outcome) than no points were assigned. If, on the other hand, the passengers felt frightful (even if the aircrew performed the event correctly) safety points were awarded. This, above all other mechanics, instilled the attitude in the detachment personnel that the user determined quality and that a self-perception was not the germain issue. The mechanism for determining passenger feelings was a personal feedback trifold made available to all passengers (Fig 4).

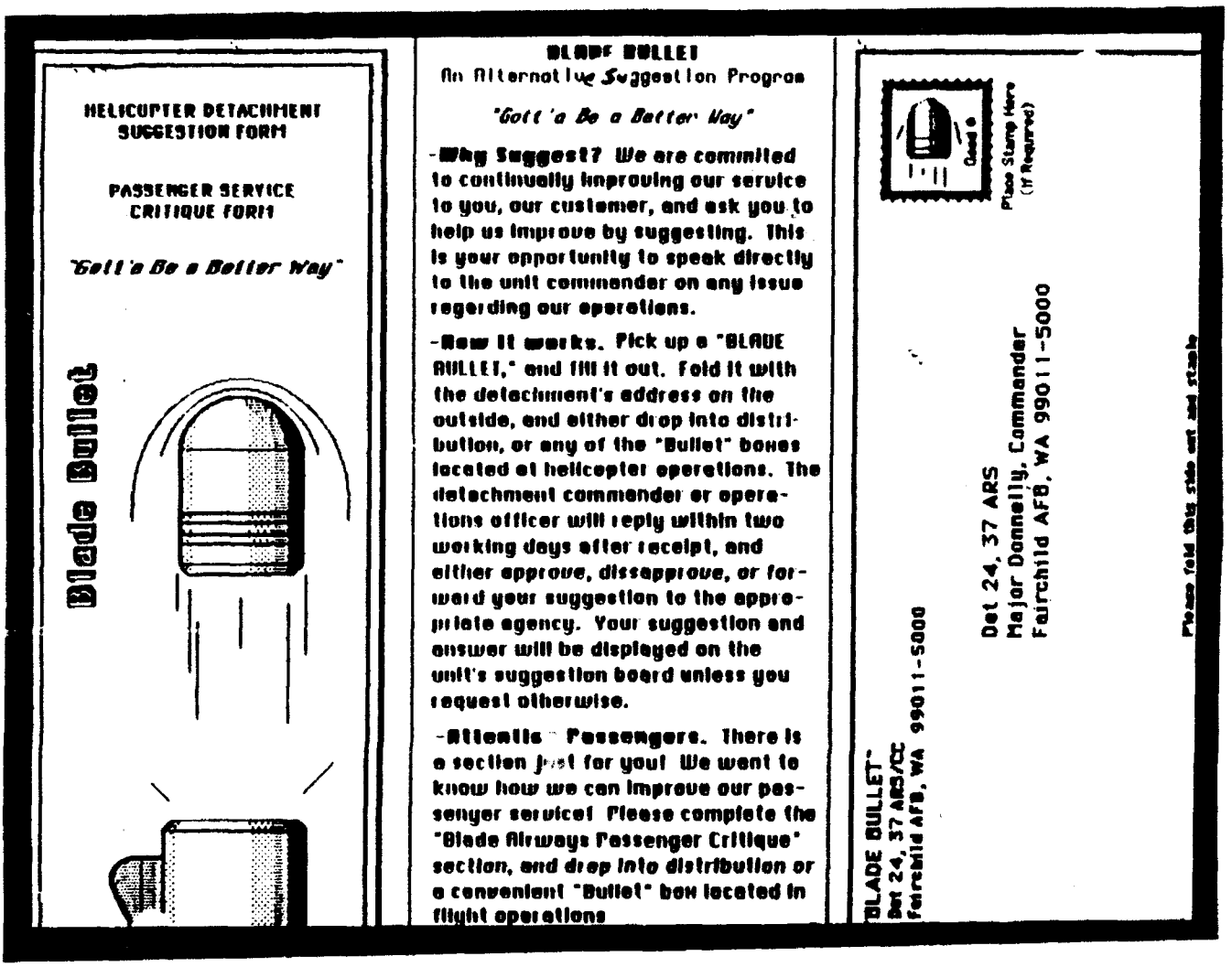

Fig. 4 (Suggestion/Passenger Comment TRI-Fold)

SUGGESTION AND PARTICIPATION

In the preceeding years the 37th squadron averaged three formal suggestion program entries per year. According to John Hudiberg, former Chief Executive Officer of the Deming Award winning Florida Power and Light, if you had to pick just one indicator to assess the quality environment of

an organization, the number of suggestions the people submit would be the one measurement.[13] For in it, all of the vital attributes of quality must be present. The workers must feel personally responsible for improvement, they must feel their ideas will be listened to, and there must exist the mechanisms to implement the approved idea. If this is so, the 37th squadron (and probably the military as a whole) fail miserably.

Coincidental with the TQM implementation efforts at this squadron, the Commander-in-Chief of the Military Airlift Command began a new command suggestion program called Quality Eagle Initiatives (QEI). In just a 4-month period, the Air Rescue Service submitted 45 QEIs; the 37th Squadron accounting for over half (a 24-fold increase in the squadron's "Hudiberg Test"). The key aspects of the QEI Program corrected longstanding problems with the historical Air Force Suggestion Program. Namely, the higher headquarters "commanders" were held accountable for replies, not staffs. And equally important, the QEI Program required prompt replies to the suggestors (3 days for commanders lower than MAJCOM and 5 days for the MAJCOM). In sum, management was responsive. The following example will illustrate the type of QEI submitted.

In response to passenger complaints about the predeparture requirements for dispatches from the central base to outlying missile fields, another PIT analyzed the actions involved. Host base (SAC) members and local 37th detachment people made a flow chart of passenger

predeparture activities. They discovered a significant step in the process that was redundant and time consuming. The SAC Transportation Control Center (TCC) required all dispatching personnel to go through their offices for base departure authority and by-name manifesting. This would normally take approximately 30 minutes. Once they arrived at the helicopter unit they were once again required to be manifest in accordance with MAC flying regulations. Furthermore, while enroute to and from the field, "operations normal" radio reporting was required to the Transportation Control Center. The typical maintenance worker dispatch d to the field was delayed up to a half hour by the process; and overcontrolled once on the road.

A suggestion from the SAC-MAC team asserted that the helicopter flight passenger manifest should suffice the TCC requirement, and recommended the helicopter unit be empowered with dispatch authority. Also, since inflight pilot reporting was more stringent then the TCC process, they suggested the TCC reporting be omitted. A 6-month test was run on one ICBM base and than implemented squadron-wide at all five other ICBM bases. This example epitomized all of the principles by John Hudiberg. In response to a customer complaint, the workers felt responsible for mission improvement. Additionally, they thought their recommendations would be listened to. Furthermore, a mechanism and climate existed to implement the change. Equally important was the aspect that the improvement captured a noteworthy piece of teamwork (SAC and MAC

workers) and the empowerment delegation from a base level staff to an operational unit. Dispatch time was reduced and passenger processing streamlined.

LESSONS FROM THE 37TH EXPERIENCE

How did a squadron go from mediocre neglect to one of the best in the command? Some argue TQM is "just good leadership or proper management!" This may or not be so; either way it is an issue of other discourses. The fact is, TQM was the environment for this case. Therefore it is valuable to examine the unit actions from a TQM perspective for lessons in quality, management, and/or leadership.

The most important lesson from the 37th Squadron TQM experience was the role leadership played in creating the climate for improvement; that is, a culture of a shared belief in doing the "right thing" (or product) for the right customer. This is in contrast to an organizational culture which, instead stressed "doing things right," for perhaps an incorrect customer. Workers will normally do things correctly when properly skilled, it is the leaders role to ensure their efforts are properly directed. The statistical tools of TQM, as with all other evolutionary management tools, were not quality; the way management thought about them was quality. For example, many people easily get carried away with the tools of management because they are easy to grasp, but as Dr. Deming states in the preface to

the first quality epic, Out of the Crisis, "the object of this book is to change the way western management thinks.[14]" Or as Joseph Juran, another quality guru puts it, "a good way to lose time in improving quality is to focus on tools and try to apply them.[15]"

There are three basic tenents of quality regardless of academic authority, they are: a focus on the customer, the use of statistical data to meet the customer's expectations, and a culture which expresses an elevated (at least equal) value to doing the right thing in addition to the scientific management emphasis on doing things right.[16] Leadership is the former, management the latter.

As Dr. Charles N. Weaver stated, "When TQM has not been successful, it has never been because of a dificult or unusual type of organization. TQM failure is almost always because of a reluctant CEO.[17]" This certainly was not the case for the 37th Air Rescue Squadron experience.

CINCMAC, General H.T. Johnson, the "CEO" of the parent squadron was not a reluctant TQM supporter. It is not coincidence that he alone shares the majority of credit for quality culture building in this experiment. General Johnson performed the important leadership function of providing the quality environment by radically: demonstrating a commitment to improvement, reorganizing the headquarters, empowering the workforce, and stressing the correct identification of the customer. Perhaps Tom Peters said it best in his book Thriving On Chaos, "sometimes leaders find themselves having to dismantle the very

bureaucratic norms which they themselves helped foster and create.'[8]"

The CINC's initial demonstration of commitment to TQM was his 1990 "Commander's Conference." Each commander was required to read Balaco's Teaching the Elephant to Dance. An intellectual ice-breaker for TQM's empowerment.'[9] At this conference, one of the three days was dedicated to TQM briefings and instruction. For a CINC to spend a third of his agenda on a single subject sent a clear signal to subordinate commanders.

Empowerment came quickly thereafter. In the flying world of MAC there were two cultural impediments to individual empowerment. First, the bureaucratic norm of "a right way to do things" was enshrined in an almost reverent atmosphere towards regulations and manuals. Secondly, a system of inspections ensured compliance to regulations, at least as interpreted by inspectors. General Johnson dismantled this climate by the pronouncment "all MAC operational regulations were quidlines (emphasis added) only[20]" and the cancelation of the Aircrew Standardization and Evaluation Team (ASET) inspections. To many this was met with predictions of catastrophy, prophesizing a rampant disregard for safety and an increase in accidents. The truth was 1991 turned out to be the "safest" year of flying in MAC history.[21]

The empowerment impact at the squadron level was noticed. The preliminary feeling of freedom and independence (the predicted anarchy) quickly gave way to an

overwhelming feeling of personal responsibility. TQM's goal of creating personal investment in corporate success was fostered. This is directly opposed to the climate where as Sashin and Kiser point out, "they have to obtain approval from above for every minor change that might be made in some set of standard procedures.[22]"

A squadron example of this pitfall was seen at the Western Test Range support detachment. A major part of their mission was to act as a platform for photographic documentation of ICBM research and development launches. The photographer desired a clear, unobstructed view for his camera lens. Shooting through the small, removeable (emergency exit) window in the door was sufficient, but not allowed by a "higher headquarters" staff interpretation. The argument followed that since there were written procedures for passengers and equipment in the back of a helicopter flown with the sliding door wide-open (not just the window) that is the way it must be done (and rules required an extra crew member in the back to supervise the passenger and equipment due to the risk of falling loose equipment). The problem was, this unit had an above average incidence of "dropped objects", i.e. things fell from the helicopter that were not supposed to.

Within the experimental TQM environment, the new found freedom they percieved from CINCMAC messages, and no longer under the threat of the staff inspectors, the detachment people re-examined the problem. They discovered two things: one, the highest rate (determined by a Pareto

analysis) of dropped objects ocurred during photographic missions, and two, the conventional wisdom among the crews was that the extra crew member in the back to supervise loose items was not so much a preventor of dropped objects, as much as only a witness to the affair. After discussions with the photographer (customer) they began shooting the missions with the door closed through the removed window. Dropped objects decreased. Seem simple, yes; common sense, perhaps. The lesson was, until the crew members felt personally responsible for mission execution, merely complying with the regulations (however incomplete) was satisfactory. The new procedure reduced accidents, eliminated the need for an additional crew member, and most importantly still satisfied the customer.

Proper customer identification and alignment of organizational procedures toward customer requirements is a tenant that TQM senior leadership must ensure. Improper customer alignment cannot be saved by any amount of management control tools. Sometimes the misplaced efforts to the wrong customer can doom the organization to mediocrity. In the case of the Military Airlift Command, that was also turned around by CINCMAC. Simply, he espoused the mission of MAC was to provide airlift to the nations DOD customers, i.e., Army, Navy, Air Force, etc. And that the command's flying time must be focused primarily on this support. Previous to this statement of the obvious, MAC's own school, Airlift Operations School, instructed the command that aircrew training drove requirements: airlift

to others was a byproduct of this time."[23] Not surprisingly, a culture existed that fostered a higher than appropriate management attention to flying time management, at the expense of airlift customer expectations. The similar 37th Squadron's misuse of flying time data mentioned earlier showed how statistical process control is not TQM, customer alignment and culture is necessary for quality.

Properly designed, measurement can foster a quality environment and maintain a focus on the customer. In the process of designing the 37th squadon measurement tools, several arguments were overcome which stress the proper environment of a quality culture. For example, after a long emotional debate it was decided that the measurement definitions had to be a "no excuse" criteria. The most controversy surrounded the discussion of how to treat missions which were not supported due to weather induced cancellations, i.e. factors out of the unit's control. It was determined that not meeting a customer's expectations was classified as a failed mission. The logic went like this. If everything is looked at as a process, even things such as traditional good excuses might be reviewed to see if there actually was a management change that could affect it.

This approach worked well. Early in the measurement discussions it was determined to define a "late takeoff" even when the reason for lateness was the fact the passengers arrived late. Traditional management viewed this as outside the unit's control and therefore a good excuse.

However, we found that a specific mission, transportation of missile combat crews, was habitually late. This caused a malaise in both parties. The helicopter crews were nonchalant in their approach to flight preparation; "knowing" the passengers would show late. The missile crews demonstrated little concern for getting to the helicopter unit; they "knew" the helicopter folks were never ready. An examination of the issue discovered the major cause of the problem was a poor headquarters produced schedule. The missile crew procedures required alert briefing procedures that made it almost impossible to meet the scheduled takeoff time. A more realistic takeoff schedule to accomodate the missile crew requirements was created. It was not long afterwards that the helicopter crews found their passengers arriving at the appropriate time and the missile crew passengers found the helicopter crews ready when they arrived. This simple example illustrated the Deming 85-15 rule.[24] That is, 85 percent of the time a process problem is management, not workers. An inappropriate management schedule caused workers to be destined to fail; making both customers and suppliers unhappy.

THE ROLE OF SENIOR LEADERSHIP

The role of senior leadership in the Total Quality Management implementation is three-fold. First, no one except senior leadership can demonstrate the commitment to

quality. Second, senior leadership must shake the present organization loose from its barriers to quality. And third, leadership must instill the cultural values vital to long term improvement.

"The Iron Law of Organizational Development is that any initiative to improve must have the strong, visible, and continual support of its CEO.[35]" Structural creations such as quality councils at the executive level are important. Examples of quality improvement councils in extremely successful companies have been documented by Juran.[36] In the case of the 37th Air Rescue Squadron, Quality Councils were indispensible. The councils were the ones who organized (and funded) the training, communicated the corporate values, and provided the cross-functional teamwork necessary.

Perhaps the most visionary actions senior leadership must take are those which break down organizational barriers to quality. There are two major purposes to an organization's structure; to establish relationships and identify accountability[37]. The successes in the 37th Air Rescue Squadron were largely achieved by recognizing their inappropriate organizational structure. By this I refer to the fact that the customer-supplier relationship of the 37th and their host base wings was strained due to separate MAJCOM administrative commands. This obstacle was overcome by a concerted effort, and may now be longterm with the Jan 92 Air Force reorganization which placed the 37th assets within the host base MAJCOM. The Air Force's One Base - One

Boss, philosophy of organization is a step in the right direction.[28]

The most significant barriers to break are probably less obvious to senior leadership and entail much more risk. General H.T. Johnson's declaration that all regulations were guidlelines (mentioned earlier) would have accomplished nothing had he not taken the subsequent actions of cancelling the headquarters standardization/evaluation team inspections and changing the mission statment of the command's Inspector General.

General Johnson took Deming's Point #3 of his famous "14 Points," literally. The MAC Inspector General Directorate was changed to the Directorate for Quality Services. This was more than a name change. Instead of the IG team conducting Managment Effective Inspections to certify compliance with program regulatory guidelines, the "QS" team conducted Quality Assessment Visits. The charter of the Quality visits was to teach, encourage, and foster the TQM culture. When this team visited the 37th squadron, a full day of their 4-day visit was spent providing advanced measurment technique classes. The assessment criteria used by the team was the Federal Quality Institute's.[29]

It has been asserted that "leadership is doing the right thing...management is doing things right." Management having to do with accomplishing tasks effiently and leadership dealing with culture and vision. That is, leadership should concentrate on identity (mission, goals, and values). Dr. Edgar H. Schein states, "one of the most

decisive functions of leadership may well be the creation, and if necessary the destruction, of culture.[20]"

The destruction of culture can be seen as breaking the paradigms, or blinding attitudes, which Joel Barker popularized.[21] In the present way of western management, and in particular the US Military, there are three paradigms senior leadership must shatter. The "survival of the fittest attitude", the "one best method attitude", and the "show me quick results attitude."

It is certainly part of the american culture that individual action in competition with others brings out the best in everyone; and in an Adam Smith invisible hand sort of way, the community at large is improved. This may be the underlying principle of capitalistic economies, but it is sub-optimizing in the organizational climate (The competition among the detachments to obtain the highest percentage of flying time). Take for example the interaquadron competion which takes place in an aircraft wing. For example, competing each squadron against all others to meet or exceed aircraft generation goals, assumes that the individual squadron will be motivated to higher performance levels. But ask a squadron maintenance supervisor if he would give a spare part to another squadron and you find an ugly answer. To provide another squadron assistance is contrary to the paradigm. Ask him what his purpose is. Is to meet the goal or provide better support? Just imagine how the wing's aircraft generation performance could be improved if the leadership educated everyone

to the larger mission. Strangely, competition severely reduces effectiveness.

Frederick Taylor produced a revolutionary management concept in the industrial revolution with his scientific management studies. Through time and motion studies the "one best way" culture grew. Unfortunately, this management philosophy's past success is also its present failure. The world is constantly changing; if there is a one best way, a better way comes along soon. A leader who places emphasis on compliance to a standard misses the opportunity to improve. In this organizational culture the values and beliefs understandably measure with a sundry of reporting procedures the degree of compliance, rather than the continuous improvement value of TQM. The religion of "one best way" fails to recognize that customer's requirements and expectations change, procedural techniques are invented, and creative people leave the organization. In the 37th case, more reliable helicopter engines had made flying at night safer years ago, but the once sound requirement for elevated approval authority remained enshrined in the regulation.

The third goal of senior leadership must be to maintain focus on the philosophy, not the tools. The measurement tools of TQM are nothing more than an evolutionary improvement of data collection. The value of TQM tools is, they are means, not ends. A demand for short term results will succeed. That is, as in Management By Objectives, Zero Defects, or any other organizational development effort, a

short term increase in productivity will likely result. But in this case TQM will become just another in the long list of fad management tools; rather than a long term shift in culture. A current example will illustrate this difference. Presently the Air Combat Command has a measuring and reporting system in their Finance Centers for Travel Voucher accuracy and turn-around times. A focus on the tool will produce an improvement; if for no other reason the likeliness of the Hawthorn Effect. A key indicator of this would be if Finance Center workers believe the reason they are measuring voucher turn-around times is to meet a command goal (the inference being a pass-fail test of competition and compliance). A true TQM climate would exist if the Finance Center worker believed he was collecting data to see why turn-around times were not improving (data to identify processes and management systems requiring change).

CONCLUSION

Total Quality Management worked in the 37th Air Rescue Squadron; it can work in any military organization. TQM worked because it combined philosophy with mechanics; it synthesized the requirements of leadership and the tools of management.

Of leaders, TQM solicits vision. It focuses the intellectual energies of the commander on mission, direction, and culture. It teaches leaders to use

management tools as leadership enablers, not as substitutes. Let us review the 37th experience with these summaries in mind.

First, TQM forced the 37th to properly focus on their host base mission. They discovered that over the years they had drifted away from it. An organizational structure of separate major commands, one for the host base and one for the helicopter detachments, created a customer-supplier misalignment. This was overcome with increased attention in the short run and an Air Force reorganization for the long run. Once communication between them was re-established a longstanding failure in their mission (security) came to light. A cooperative Process Improvement Team addressed the problems and made significant changes that even corrected a higher headquarters (IG) deficiency.

Selecting a visionary direction to improve from excellent to superior support made the squadron deal with the TQM requirement to measure their service. The first victim of quality measurement was the realization that the historical measurement (percentage of flying time) contributed to the customer-supplier disconnect. Using a simple system of weighting points against the key result areas of their missions, the squadron established a baseline of performance. The measurement indicators identified process failures, causing management systems to change.

Culture was the critical ingredient in the 37th success. Most of the cultural changes resulted from senior leadership actions. Compliance with regulatory guidelines was no

longer satisfactory. The empowerment of people created a personal feeling of mission accountability.

Finally, the vital role of senior leadership to create Total Quality as a way of life, not another organizational development fad was emphasized. To instill a climate of striving for continuous improvement required debunking the myths of competition, quick fixes, and magical tools.

Notes

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[4] LTC Gordon M. Wiram, Letter to Detachment Commanders, Oct 1991.

[5] Strategic Air Command, Security Procedures Regulation, 207-16.

[6] 90th Missile Wing Commander, Interview, Dec 1990.

[7] Charles N. Weaver, TQM A Step-By-Step Guide To Implementation, 1991, p. 161.

[8] 341st Missile Wing, Operations Plan 207-16, 1989.

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[10] 37th Air Rescue Squadron, 37th Regulation 55-1, undated.

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[16] Frederick Winslow Taylor, Scientific Management, 1947.

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[18] Tom Peters, Thriving on Chaos, 1987.

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